

## FCC 47 CFR MPE REPORT

Pulnda International limited

AC SOCKET

Model Number: PZ001

Additional Model: SH-PA2, PA-S18, PL001, PZ002

FCC ID:2APQM-PZ001

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Report Number:	ESTE-R1805011
Date of Test:	Apr. 26 ~ May. 09, 2018
Date of Report:	May. 10, 2018

## Maximum Permissible Exposure

### 1、 Applicable Standard

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

#### (a)、 Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength E (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Times   E   2 ,   H   2 or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-10000			5	6

#### (b)、 Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength E (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Times   E   2 ,   H   2 or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-10000			1.0	30

Note: f=frequency in MHz; \*Plane-wave equivalent power density

### 2、 MPE Calculation Method

$$E \text{ (V/m)} = (30 \cdot P \cdot G) / 0.5/d \quad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = E^2/377$$

E = Electric Field (V/m)

P = Peak RF output Power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = (30 \cdot P \cdot G) / (377 \cdot d^2)$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

### 3、Conducted Power Result

Mode	Frequency (MHz)	Peak output power (dBm)	Peak output power (mW)	Target power (dBm)	Antenna gain	
					(dBi)	(Linear)
IEEE 802.11b	2412	12.78	18.967	12±1	3	1.995
	2437	12.50	17.783	12±1	3	1.995
	2462	12.73	18.750	12±1	3	1.995
IEEE 802.11g	2412	9.13	8.185	9±1	3	1.995
	2437	9.10	8.128	9±1	3	1.995
	2462	9.34	8.590	9±1	3	1.995
IEEE 802.11n HT20	2412	6.08	4.055	6±1	3	1.995
	2437	6.31	4.276	6±1	3	1.995
	2462	6.40	4.365	6±1	3	1.995

### 4、Calculated Result and Limit

Mode	Target power (dBm)	Antenna gain		Power Density (S) (mW/cm <sup>2</sup> )	Limited of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
		(dBi)	(Linear)			
Wi-Fi						
IEEE 802.11b	13	3	1.995	<b>0.00792</b>	1	Compiles
IEEE 802.11g	10	3	1.995	<b>0.00397</b>	1	Compiles
IEEE 802.11n HT20	7	3	1.995	<b>0.00199</b>	1	Compiles